

REMARKS

Applicants have received and reviewed the Office Action dated August 11, 2008. By way of response, Applicants have canceled claims 8, 15 and 19-20 without prejudice and added new claims 23-27. New claims 25-27 generally correspond to previous claim 15, 19, and 20, respectively. Claims 23 and 24 generally correspond to previous claim 8. No new matter is added by this amendment. Claims 23-27 are pending. Applicants submit that the pending claims are supported by the specification as filed.

For the reasons given below, Applicants submit that the amended claims are in condition for allowance and notification to that effect is earnestly solicited.

Claim Rejections – 35 U.S.C. § 103(a)

The Examiner rejected claims 8, 15, 19, and 20 under 35 U.S.C. § 103(a) as obvious over Villani et al., WO 85/03707 and also referring to WO 02/42290 and Schumacher et al., WO 99/01450. Although this rejection has not been raised against the newly presented claims, it is discussed insofar as it might apply. Applicants respectfully traverse this rejection.

The present invention relates to a novel process for making desloratadine. The claimed process includes hydrolysis of loratadine using methanesulfonic acid – an organic acid – to yield desloratadine. Claim 23 recites heating loratadine (the compound of formula 3 “where R is -COOR₁, and R₁ is ethyl”) “in the presence of methanesulfonic acid for 5-15 hours at about 90° to 120°C to produce desloratadine”. The claimed reaction removes the “R” group from the compound of formula 3 to yield desloratadine. The claim further recites that the resulting “desloratadine is greater than 99.5% pure by HPLC and a 5% (w/v) solution of the desloratadine in methanol has an absorbance less than 0.15 AU at 420 nm.” Claim 24 recites additional procedures that can be used in preparing the pure desloratadine.

The Office Action asserts that page 11, part B, of the WO 85/03707 reference discloses converting loratadine to desloratadine using an acid. In fact, the reaction in page 11, part B, of the WO 85/03707 does not employ loratadine as a starting material. Rather, the reaction in WO 85/03707 starts with a cyano compound (“8-Chloro-6,11-dihydro-11-(1-cyano-4-piperidylidene)-5H-benzo [5, 6] cyclohepta [1, 2-b]pyridine”). The reaction in page 11, part B, WO 85/03707 converts the cyano group to make desloratadine. The presently claimed process does not remove a cyano group because there is no cyano moiety in the claimed starting material, loratadine.

In addition, page 11, part B, of the WO 85/03707 discloses using a mineral acid – HCl. The presently claimed process employs an organic acid, methane sulfonic acid, not a mineral acid. This reference does not disclose or suggest using an organic acid in any reaction to make desloratadine from loratadine.

The Office Action asserts that WO 02/42290 discloses employing methane sulfonic acid. However, WO 02/42290 discloses adding methane sulfonic acid to desloratadine to produce a salt of desloratadine – acid plus base equals a salt including the acid and the base. Thus methanesulfonic acid is used to convert the desloratadine to the disulfate salt of and not for preparing desloratadine from loratadine. In contrast the presently claimed process cleaves a bond between a nitrogen atom and a carbon atom to convert loratadine to desloratadine. The claimed process removes the “R” group from the compound of formula 3. WO 02/42290 does not disclose or suggest a reaction that converts loratadine to desloratadine by heating loratadine “in the presence of methanesulfonic acid for 5-15 hours at about 90° to 120°C to produce desloratadine”. Further, WO 02/42290 does not disclose or suggest that an organic acid would be effective in such a reaction.

Further, as shown in the comparative examples, the desloratidine made according to the methods in the Schumacher and Villani references shows this impurity peak in HPLC (*see* page 11, line 26 to page 12, line 2 of the present application). The presently claimed process does not produce this impurity. Similarly, Applicants submitted with the Amendment and Response submitted October 15, 2007 data demonstrating that the desloratadine produced according to the procedure of the PCT publication WO99/01450 produces this impurity. This WO reference is referring to the percent of the particular polymorph when it refers to 100% purity – it means 100% of the polymorph of interest and 0% another polymorph, not 100% chemical purity according to Applicants HPLC method.

The present claims are directed to a process that surprisingly and unexpectedly produces desloratidine without the impurities found in desloratidine made by the methods described in the cited references. Thus, these cited references neither teach nor suggest the presently claimed invention.

Accordingly, based on the foregoing differences, Applicants respectfully submit that the references cited in the rejection neither teach nor suggest the presently claimed process, and withdrawal of this rejection is earnestly solicited.

SUMMARY

In view of the above amendments and remarks, Applicants respectfully request a Notice of Allowance. If the Examiner believes a telephone conference would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the below-listed telephone number.

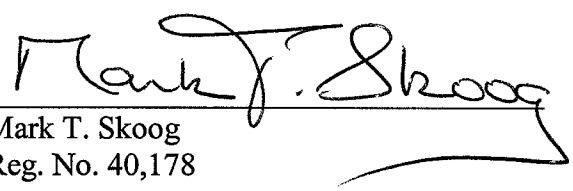
Please charge any additional fees or credit any overpayment to Merchant & Gould P.C.,
Deposit Account No. 13-2725.

Respectfully submitted,

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9 Dec '08


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